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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,197	04/09/2001	Thomas R. Giallorenzi	907.0013USU	6842
29683	7590	10/28/2005		
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/829,197

Applicant(s)

GIALLORENZI ET AL.

Examiner

Hong Cho

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. Figures 1-3 are missing in this application.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-14, and 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (U.S 6021333), hereinafter referred to as Anderson in view of Watanabe et al (U.S 5802110), hereinafter referred to as Watanabe.

Re claims 1 and 14, Anderson discloses a mobile communication system comprising mobile stations and base stations (*a communication system having subscriber stations (SS) and base stations (BS)*, column 14, lines 63-65). Anderson discloses using same traffic message structure for forward and reverse link communication (*arranging a forward link and a reverse link to operate with a common waveform*, figures 5b and 5c; column 8, lines 34-36). Anderson fails to disclose the forward link operating at a first

frequency that is transmitted by the BS and received by the SS, and the reverse link operating at a second frequency that is transmitted by the SS and received by the BS. Watanabe discloses the mobile station receiving the first signal with the frequency f1 and transmitting the second signal with the frequency f2 (column 6, lines 20-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to have the forward link operating at a first frequency and the reverse link operating at a second frequency in order to avoid interference between base stations and mobile stations. Anderson discloses an exemplary transmitter and receiver employed for spreading and dispreading signals by using a single chip sequence generator (*using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs*, column 6, lines 37-43).

Re claims 3 and 16, Anderson discloses the same message structure used for both forward and reverse link communication (*common wave form enables essential parameters of the forward and reverse link to be the same*, column 8, lines 45-60).

Re claims 4 and 17, Anderson discloses essential parameters comprising a modulation format (figure 2, elements 205 and 211).

Re claims 5 and 18, Anderson discloses essential parameters comprising a chip rate (figure 2, elements 204 and 210).

Re claims 6 and 19, Anderson discloses essential parameters comprising a symbol rate (column 7, lines 10-12).

Re claims 7 and 20, Anderson discloses essential parameters comprising a bit rate (column 7, lines 14-16).

Re claims 8, 9, 21 and 22, Anderson discloses essential parameters comprising a frame or superframe rate (figures 5b and 5c, elements 515 and 545).

Re claims 10 and 23, Anderson discloses essential parameters comprising a frame structure (figures 5b and 5c).

Re claims 11 and 24, Anderson discloses essential parameters comprising an error control coding scheme (figures 5b and 5c, elements 531 and 561).

Re claims 12 and 25, Anderson discloses essential parameters comprising synchronization words (figures 5b and 5c, elements 523 and 5531).

Re claims 13 and 26, Anderson discloses essential parameters comprising a control field structure (figures 5b and 5c, elements 527 and 557).

#### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 15, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Watanabe and further in view of Moravan et al (U.S 6894992), hereinafter referred to as Moravan.

Re claims 2 and 15, Anderson discloses all of the limitations of the base claim, but fails to disclose providing switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency. Moravan discloses supplying a control signal making a mobile station functioning in base station mode (column 1, lines 42-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to make one of mobile stations functioned as a base station so that it would provide redundancy in case of failure of the primary base station.

Re claim 27, Anderson discloses a mobile communication system comprising mobile stations and base stations (*a communication system having subscriber stations (SS) and base stations (BS)*, column 14, lines 63-65). Anderson discloses using same traffic message structure for forward and reverse link communication (*arranging a forward link and a reverse link to operate with a common waveform*, figures 5b and 5c; column 8, lines 34-36). Anderson fails to disclose the forward link operating at a first frequency that is transmitted by the BS and received by the SS, and the reverse link operating at a second frequency that is transmitted by the SS and received by the BS. Watanabe discloses the mobile station receiving the first signal with the frequency  $f_1$  and transmitting the second signal with the frequency  $f_2$  (column 6, lines 20-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to have the forward link operating at a first frequency and the reverse link operating at a second frequency in order to avoid interference between base stations and mobile stations. Anderson discloses an exemplary transmitter and receiver

employed for spreading and despreading signals by using a single chip sequence generator (*using common forward link and reverse link signal processing circuitry in the BS and individual ones of the SSs*, column 6, lines 37-43). Anderson fails to disclose providing switching circuitry for cross-connecting RF signal paths for enabling one of said SSs to function as a BS by transmitting on the first frequency and receiving on the second frequency. Moravan discloses supplying a control signal making a mobile station functioning in base station mode (column 1, lines 42-44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Anderson to make one of mobile stations functioned as a base station so that it would provide redundancy in case of failure of the primary base station.

### *Conclusion*

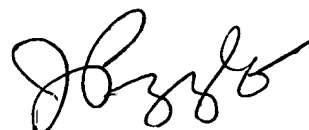
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  - US Patent (4935927) to Kaewell et al
  - US Patent (5870427) to Tiedemann et al
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3088.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hc

Hong Cho  
Patent Examiner  
10/27/2005



**JOHN PEZZLO**  
**PRIMARY EXAMINER**